Building a Complex System in a Standards-Driven Environment

USAF Total Enterprise Skills Management & Learning Initiative

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Government Services

Agenda

- Description & Status
- BCA Development
- ConOps Revision
- Next Steps

Description & Status - Challenges

- **USAF currently supports skills management and learning activities with over 200 individual systems**
- **Stove-piped environment prevents information sharing**
- **USAF standards, Command policies, Unit technical guidance, Civilian policies**
- **Mission planning challenged by lack of integrated support**
- **Full USAF Personnel (military, civilian, reserve & guard) capabilities not maximized**
- **Training management satisfaction for USAF personnel lower than organizations that permit individual support**

Description & Status - Initiative

- Focused on maximizing currently active training investments
- Evaluating current situation to maximize success of future solution
- Targeting a stable solution that integrates all USAF personnel
- Integrating applicable standards (JTA-AF, AFMANs, etc.)
- Defining a feasible solution in terms of:
  - Political
  - Financial
  - Technological
- Started with enterprise vision to revise Concept of Operations and prepare a Business Case Analysis

BCA Development – Step 1

Information Gathering

- **Interview protocol driven Site Survey**
- **Defining Alternatives**
  - **Current Capabilities**
  - **Identified Gaps**
    - **Functionality**
    - **Data support**
  - **Best Practices, Policies and Standards application**
    - **Other military services**
    - **Non-DoD Government**
    - **Commercial organizations**
- **Essential functions & data matrix driven Vendor Survey**

Essential Matrices
Functions & Data

Functional Areas		Essential Function	Description Examples	Individual	Supervisor/ Commander	Training Manager	Career Field Manager	Senior Leaders
Individual Development a unique file that tracks an individual's learning activities.	1	create and manage individual training plan	includes updating training folder	✓	✓		✓	
	2	identify training event	includes providing course catalog searching capability	✓	✓	✓	✓	
	3	submit request for training event	includes monitoring course prerequisites	✓	✓		✓	
	4	approve/disapprove training event request	includes escalation process		✓			
	5							
	6							
	7							
Mission Planning actions focused on mapping force	8	manage Master Training						
	9	perform training gap analy						
	10	search for qualified perso						
	11							
	12							
Training providing an individual anytime, anywhere,	13	send electronic notificatio						
	14	manage training resource						
	15							
	16							
	17							
	18							
Training Development implementing and maintaining training.	19	forecast training needs						
	20	forecast training utilizatio						
	21							

Functional Areas	Essential Data	Definition Examples
Individual Development a unique file that tracks an individual's	Individual Training Folder	projected/completed training and duty history data for a specific individual
	Course Catalog	description of courses offered in a listing
	Individual Training Management Forms	forms to track the monitoring of training for an individual
	Certification	certification status results of an individual's training
	Training Request	form to track the request for training for an individual
Mission Planning actions focused on mapping force	Classification & Skill Level	specific codes for each job description
	Training Gap Analysis	list of skills and aptitude of population for mission readiness
	Master Task Plan	Master Task List of job duties and the associated specialty code
Training Delivery providing an individual anytime, anywhere access to training.	Training Resources	data listing of what and who will be included in a specific training event
	Training Quotas	attributes of a class such as number of students, rosters and quotas
	Completion Results	final grade, certificate and training value of a course
Training Development implementing and maintaining training.	Course/Training Event	the material to be learned/trained in a training event
	Training Requirements	documentation of requirements, prerequisites and forcasting for a course
	Course Change Requests	specific request to track a change to training event

BCA Development – Step 2

Alternatives Measurement & Evaluation

- **Mapped Essential Functions and Data to Alternatives**
- **Determined alternatives' functionality subsets that COTS could accomplish**
- **Performed Cost Benefits Analysis (OMB 11, 94, 300)**
  - **Total Ownership Cost**
  - **Annual Savings Discounting (using mid-year values)**
  - **Net Present Values**
  - **Return On Investment**
  - **Current System retirement rates based on available functionality**

Cost Benefits Analysis Elements

- Site survey systems' actual administration costs for baseline
- REVIC for custom development estimate
- Vendor COTS & hardware quotes
- Custom and COTS retirement rates definition
  - Custom - based on REVIC
  - COTS – modified Custom rates based on true OTS functionality
- Standard formulas for:
  - TOC
  - NPV
  - ROI
  - PBP

BCA Development – Step 3

Alternative De-selection

- Functionality expected
- User acceptance of implementation process
- Cost Benefits Analysis results
- Feasibility of COTS-based solution to speed development

ConOps Revision

- **Concept of Operations description created in prior years**
  - **Assumptions included based on existing technologies**
  - **Details missing of needed functionality**

- **Improved support to mission planning through increased mission readiness**
- **Added integration of civilians**
- **Enhanced technology view**
- **Included capabilities defined by viable alternatives**

- **Being extended with development of more details in architecture products**

Next Steps

- **Requirements Definition (full SDLC support)**
  - **High level SHALLs**
  - **Based on Essential Functions**
  - **Include support for Essential Data**
- **Architecture Development (DoD Architecture Framework)**
  - **High Level Operations Concept Graphic (OV-1) in BCA**
  - **Logical Data Model (OV-7)**
    - **Underway**
    - **Preparing in DDDS format using DDA components**
  - **Operational Node Connectivity Diagram (OV-2) & System Interface Description (SV-1) planned next**